



# ADVANCED DISTRIBUTED LEARNING

## Implementing a Training Intervention

*to Increase Learning and Reduce Attrition*

**Traci Sitzmann, Katherine Ely,  
and Danny Fowler**

*Research and Evaluation Team*

ADL Co-Lab Hub

08/19/2009



<b>Report Documentation Page</b>			<i>Form Approved OMB No. 0704-0188</i>	
<p>Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p>				
1. REPORT DATE <b>19 AUG 2009</b>	2. REPORT TYPE	3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>		
4. TITLE AND SUBTITLE <b>Implementing a Training Intervention to Increase Learning and Reduce Attrition</b>			5a. CONTRACT NUMBER	
			5b. GRANT NUMBER	
			5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)			5d. PROJECT NUMBER	
			5e. TASK NUMBER	
			5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Advanced Decision Learning (ADL),ADL Co-Lab Hub,1901 N. Beauregard Street Suite 600,Alexandria,VA,22311</b>			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)	
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>				
13. SUPPLEMENTARY NOTES <b>ImplementationFest2009, 18-20 Aug 2009</b>				
14. ABSTRACT				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>24</b>
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>		



SOMETIMES WE JUST NEED REMINDERS

# Self-Regulation

- Process that enables individuals to guide their goal-directed activities over time and across changing circumstances
- Iterative process with a gradual effect on learning over time



# Sample Prompts - Question 1

Research has shown that asking yourself questions about whether you are concentrating on learning the training material will increase how much you learn during training. The training program will periodically ask you questions about where you are directing your mental resources and whether you are making progress towards learning the training material. Honestly respond to these questions and use your responses to direct your learning during training.

**Will I concentrate on learning the training material?**

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely

**Submit**

# Sample Prompts - Question 2

**Do I understand all of the key points of the training material?**

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely

**Submit**

# Sample Prompts - Question 3

**Are the study strategies I'm using helping me learn the training material?**

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely

**Submit**

# Sample Prompts - Question 4

**Have I spent enough time reviewing to remember the information after I finish the course?**

- Not at all
- Slight possibility
- Maybe
- Probably
- Definitely

**Submit**

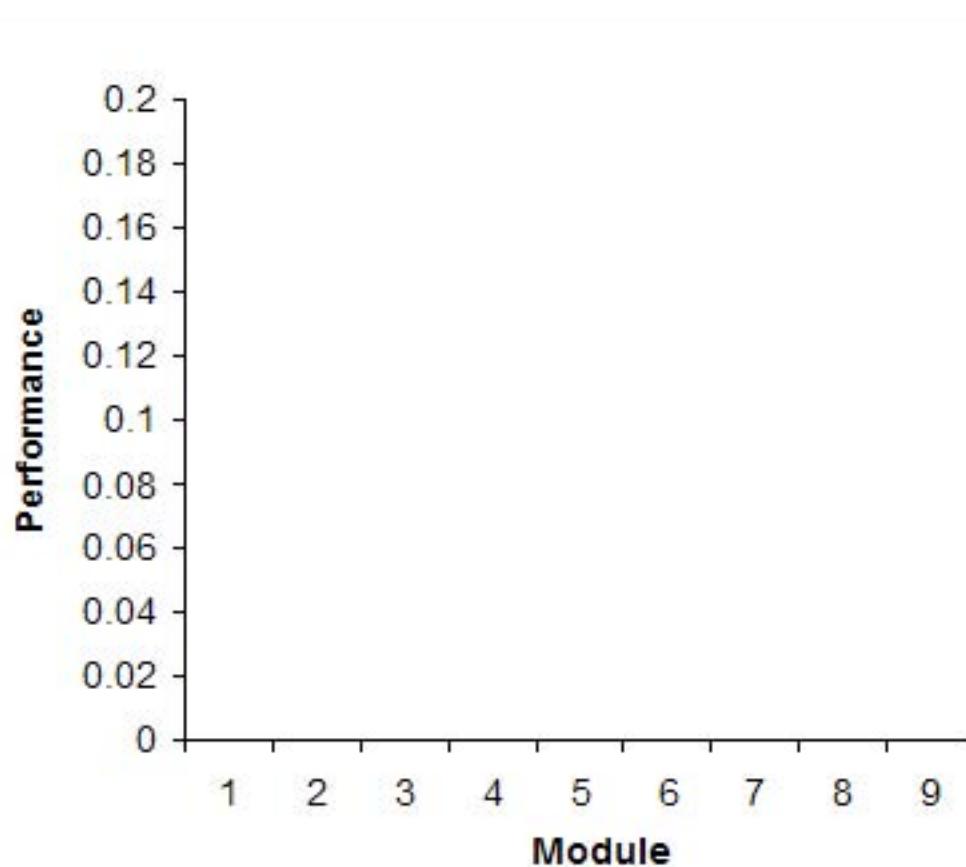
# Self-Regulation Conditions

---

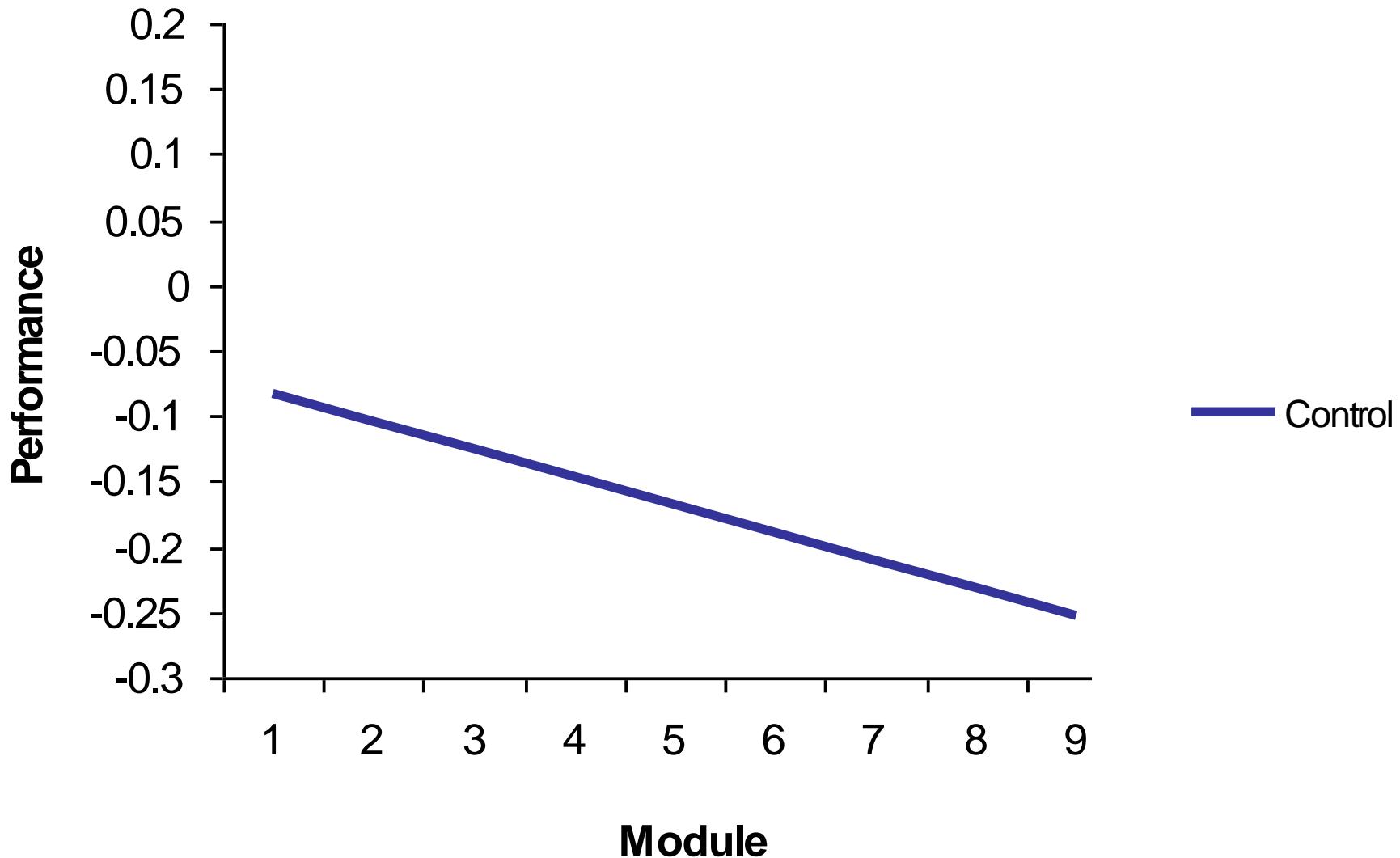
- Continuous self-regulation
  - Prompt self-regulation throughout the entire course
- Delayed self-regulation
  - Prompt self-regulation in the latter half of the course
- Control
  - Do not prompt self-regulation

- Study 1
  - Online training course on Blackboard LMS
  - 93 trainees; Average age = 44 years
- Study 2
  - PC-based radar-tracking simulation
  - 171 undergraduates; Average age = 19 years
- Study 3
  - Online training course on Microsoft Excel
  - 479 trainees; Average age = 42 years

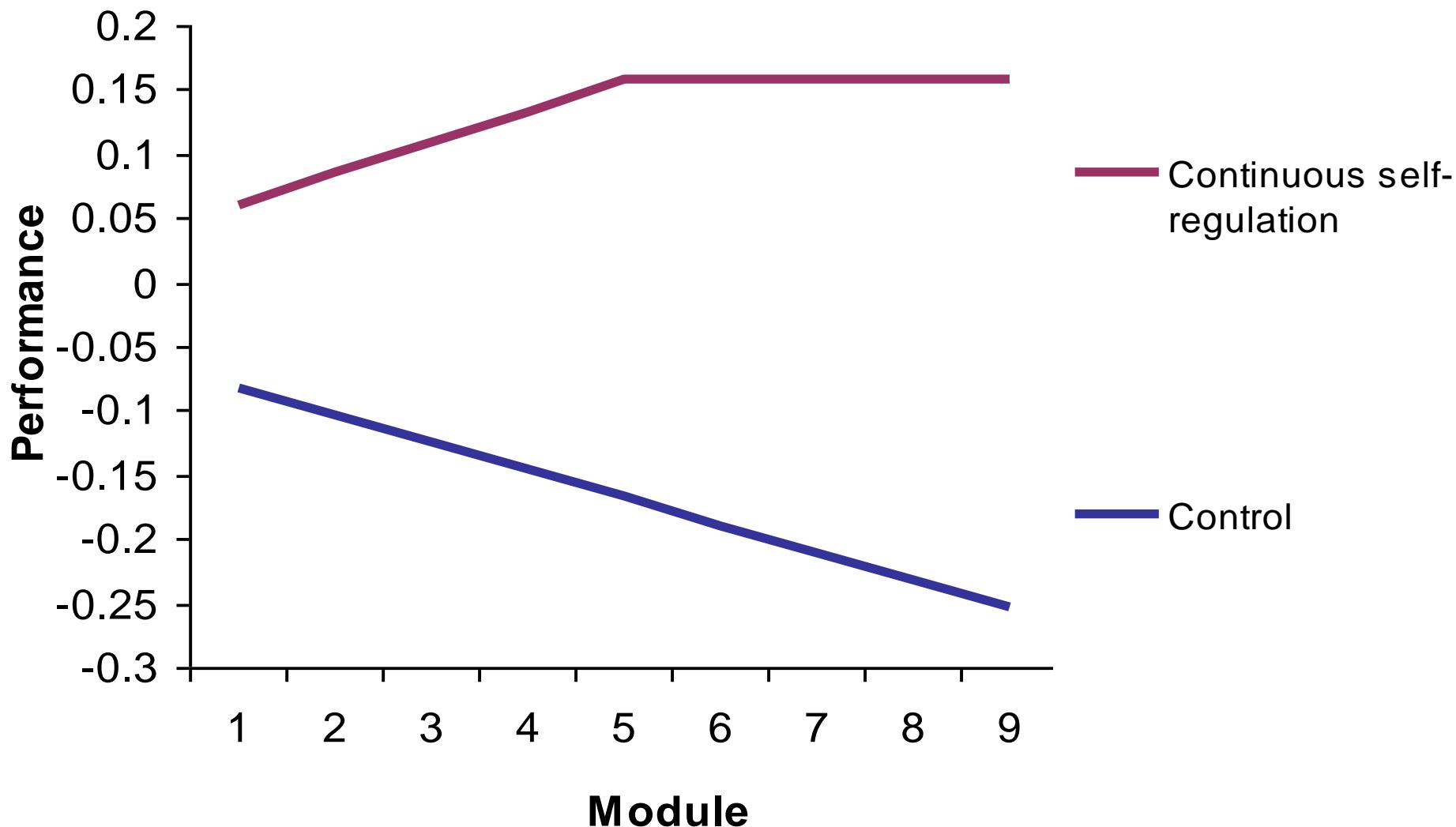
- Examine changes in performance over time
- Standardized test scores



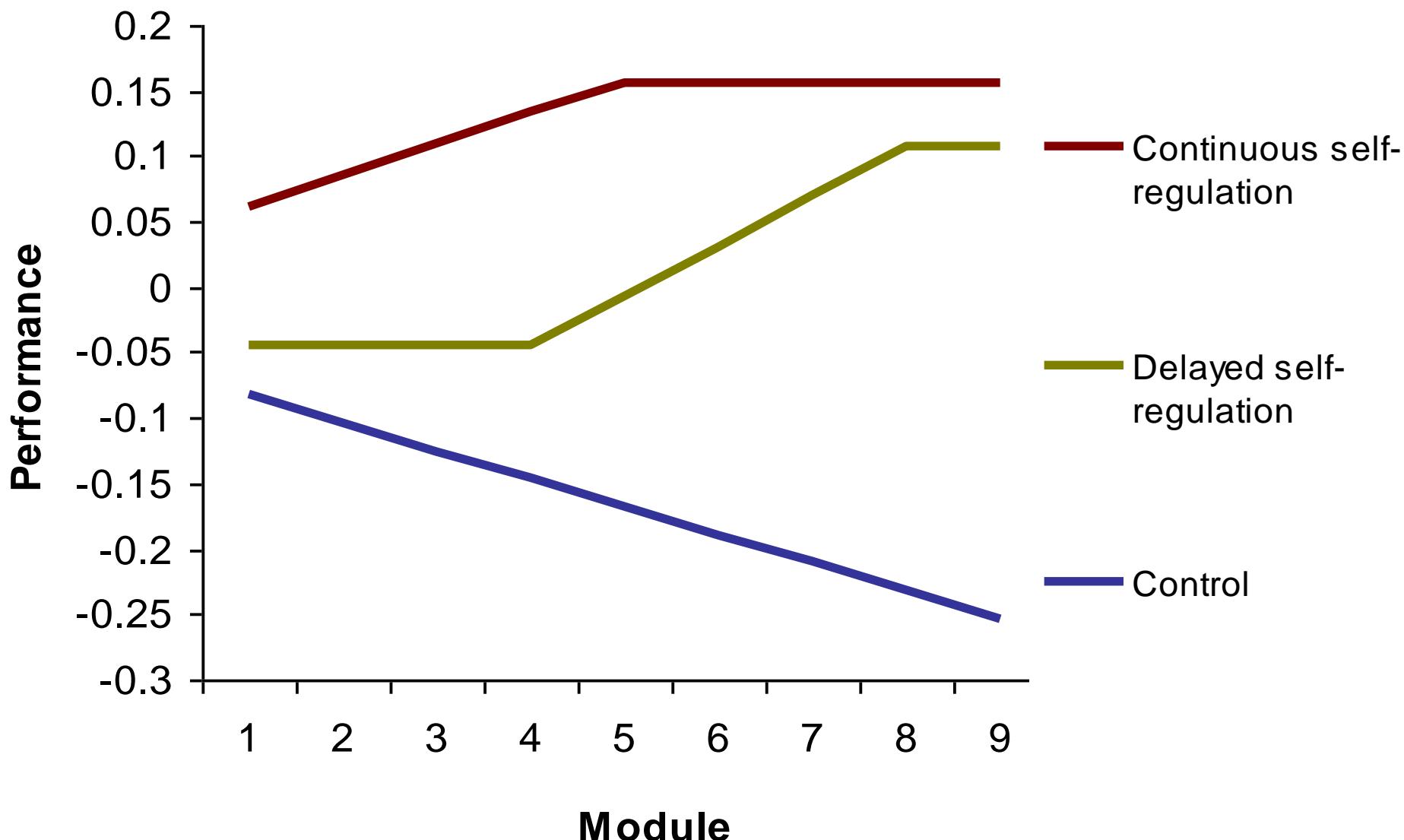
# Learning Results



# Learning Results



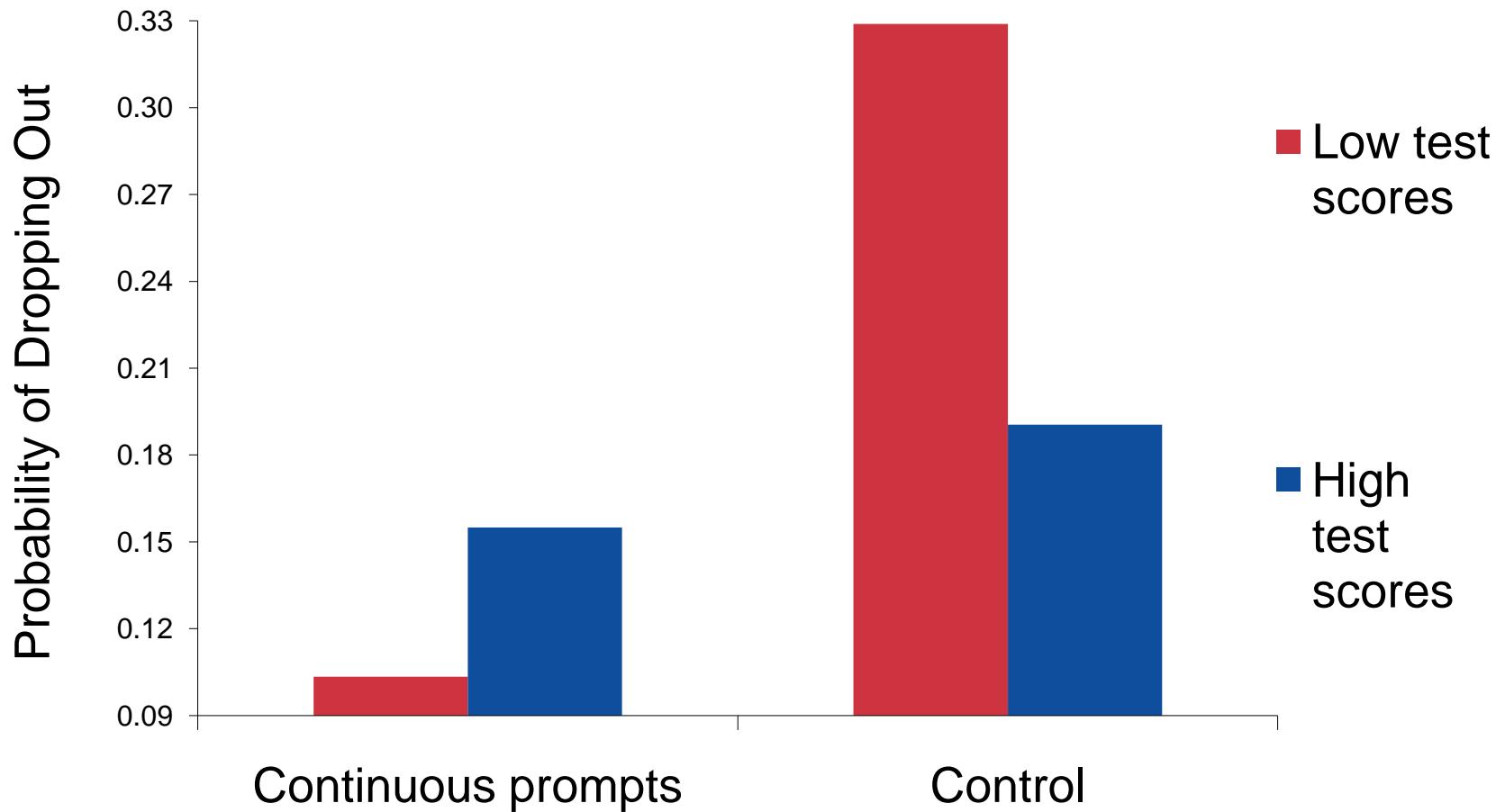
# Learning Results



# Predicting Attrition

- Tested in study 3—voluntary online Microsoft Excel training
- Prompting self-regulation throughout training resulted in a 17 percentage point reduction in attrition
- Prompting self-regulation in the second half of the course did not reduce attrition
- Trainees were less likely to drop out following poor performance when they were prompted to self-regulate

# Predicting Attrition



# Conclusions

- Adults are capable of managing their own learning when they receive reminders to self-regulate
- Prompting self-regulation is a no-cost intervention that enhances learning and reduces attrition
- Prompts can be incorporated in any Web-based training course





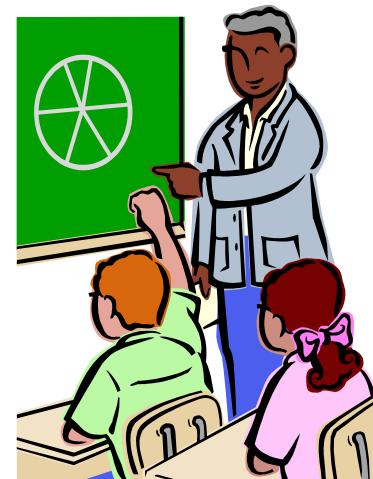
# Discussion Questions



# For which courses are prompts most appropriate?

---

- The prompts are appropriate for any self-paced course where trainees could benefit from periodically reflecting on their learning strategies



# When and how often should I prompt in the course?

---

- Implemented the prompts continuously and at regular intervals throughout the course
- In these studies, trainees were prompted approximately every 15-20 minutes
- Find natural breaking points in training (i.e. between SCOs) to regularly prompt trainees



# Do trainees need to respond to the prompts questions?

---

- The studies testing the prompts required trainees to respond to the prompts questions
- Trainees' actual responses do not matter—what is important is that the prompts encourage trainees to self-reflect and engage in self-regulatory thinking



# Am I allowed to modify the prompts questions?

---

- Yes—the prompts questions can be modified and should still be effective as long as they encourage trainees to reflect on their learning and regulate their learning progress

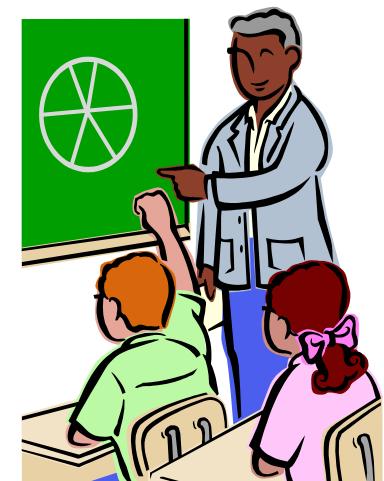


# How can I access the prompts?

- Prompts are available as SCOs:

<http://www.adlnet.gov/Technologies/Evaluation/Library/Forms/DispForm.aspx?ID=105>

- They can easily be incorporated in any SCORM-conformant course



## References

- Sitzmann, T., Bell, B. S., Kraiger, K., & Kanar, A. (in press). A multi-level analysis of the effects of prompting self-regulation in technology-delivered instruction. *Personnel Psychology*.
- Sitzmann, T., & Ely, K. (2009). *Sometimes you need a reminder: The effects of prompting self-regulation on regulatory processes, learning and attrition*. Unpublished manuscript.



# Questions or Comments?



**Traci Sitzmann**

*Research and Evaluation Team*

traci.sitzmann.ctr@adlnet.gov

+1.703.575.2013